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PATENT APPLICATION  
Docket: T5530.CIP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Mahendra S. Rao, Margot Mayer-Proschel  
and Anjali Kalyani

Serial No.: 09/109,858

Filed: July 2, 1998

For: LINEAGE-RESTRICTED NEURONAL PRECURSORS

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) Art Unit  
) 1651  
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INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. § 1.97

Assistant Commissioner for Patents  
Washington, D.C. 20231

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FEB 5 1999

MATRIX CUSTOMER  
SERVICE CENTER

Sir:

Please find, pursuant to 37 C.F.R. § 1.98(a)(1), the enclosed Form PTO-1449 which contains a list of all patents, publications, or other items that have come to the attention of one or more of the individuals designated in 37 C.F.R. § 1.56(c). While no representation is made that any of these references may be "prior art" within the meaning of that term under 35 U.S.C. §§ 102 or 103, the enclosed list of references is disclosed so as to fully comply with the duty of disclosure set forth in 37 C.F.R. § 1.56.

Moreover, while no representation is made that a specific search of office files or patent office records has been conducted or that no better art exists, the undersigned attorney of record believes that the enclosed art is the closest to the claimed invention (taken in its entirety) of which

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the undersigned is presently aware, and no art which is closer to the claimed invention (taken in its entirety) has been knowingly withheld.

Since all listed references are either in the English language or are accompanied by a translation into English, no concise explanation of relevance is required under 37 C.F.R. § 1.98(a)(3).

Statement of References Previously Disclosed  
Under 37 C.F.R. § 1.98(d)

The listed references are not enclosed because, under 37 C.F.R. § 1.98(d), they were previously cited by or submitted to the Office in U.S. Serial No. 08/909,435, filed on July 4, 1997, and which is relied upon for an earlier filing date under 35 U.S.C. § 120.

Dated this 29<sup>th</sup> day of January, 1999.

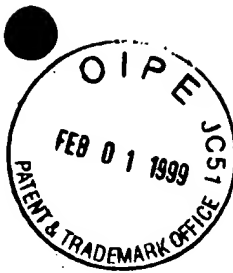
Respectfully submitted,



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Attorney for Applicant  
Registration No. 36,553

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CERTIFICATE OF DEPOSIT UNDER 37 C.F.R. § 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on January 29, 1999.

Alan J. Howarth  
Attorney for Applicant  
Registration No. 36,553

Transmitted: Transmittal for Information Disclosure Statement  
Information Disclosure Statement  
Form PTO-1449 Listing of All References  
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Att'y Docket No. T5530.CIP  
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INFORMATION DISCLOSURE CITATIONS MADE BY APPLICANTU.S. Patent Documents

<u>Examiner Initial*</u>	<u>Patent Number</u>	<u>Issue Date</u>	<u>Name</u>	<u>Class</u>	<u>Sub Class</u>	<u>Filing Date</u>
_____ A1	5,589,376	12/31/96	Anderson et al.			
_____ A2	5,087,570	2/11/92	Weissman et al.			

Foreign Patent Documents

N O N E

Other Documents

(including author (if listed), title, relevant pages, date of publication including at least month and year).

Examiner  
Initial\*

\_\_\_\_\_ A3      Gage, F.H. et al., *Isolation, Characterization and Use of Stem Cells from the CNS*, 18 Ann. Rev. Neurosci. 159-92 (1995)

Examiner:

Date Considered:

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



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- \_\_\_\_\_ A4 Marvin, M. et al., *Multipotential Stem Cells in the Vertebrate CNS*, 3 Semin. Cell. Biol. 401-11 (1992)
- \_\_\_\_\_ A5 Davis, A.A. et al., *A Self-Renewing Multipotential Stem Cell in Embryonic Rat Cerebral Cortex*, 362 Nature 363-72 (1994)
- \_\_\_\_\_ A6 Gritti, A.G. et al., *Multipotential Stem Cells from the Adult Mouse Brain Proliferate and Self-Renew in Response to Basic Fibroblast Growth Factor*, 16 J. Neurosci. 1091-1100 (1996)
- \_\_\_\_\_ A7 Reynolds, B.A. et al., *A Multipotent EGF-Responsive Statal Embryonic Progenitor Cell Produces Neurons and Astrocytes*, 12 J. Neurosci. 4565-74 (1992)
- \_\_\_\_\_ A8 Reynolds, B.A. et al., *Clonal and Population Analyses Demonstrate that an EGF-Responsive Mammalian Embryonic CNS Precursor is a Stem Cell*, 175 Developmental Biol. 1-13 (1996)
- \_\_\_\_\_ A9 Williams, B.P. et al., *The Generation of Neurons and Oligodendrocytes from a Common Precursor Cell*, 7 Neuron 685-93 (1991)
- \_\_\_\_\_ A10 Kilpatrick, T.J. et al., *Cloned Multipotential Precursors from the Mouse Cerebrum Require FGF-2, Whereas Glial Restricted Precursors are Stimulated with Either FGF-2 or EGF*, 15 J. Neurosci. 3653-61 (1995)
- \_\_\_\_\_ A11 Price, J. et al., *Lineage Analysis in the Vertebrate Nervous System by Retrovirus-Mediated Gene Transfer*, 84 Developmental Biol. 156-60 (1987)
- \_\_\_\_\_ A12 Williams, B., *Precursor Cell Types in the Germinal Zone of the Cerebral Cortex*, 17 BioEssays 391-93 (1995)
- \_\_\_\_\_ A13 Anderson, D.J., *The Neural Crest Lineage Problem: Neuropoiesis?*, 3 Neuron 1-12 (1989)
- \_\_\_\_\_ A14 Ray, J. et al., *Spinal Cord Neuroblasts Proliferate in Response to Basic Fibroblast Growth Factor*, 14 J. Neurosci. 3548-64 (1994)

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- \_\_\_\_\_ A15 Sommer, L. et al., *The Cellular Function of MASH1 in Autonomic Neurogenesis*, 15 Neuron 1245-58 (1995)
- \_\_\_\_\_ A16 Bignami, A. et al., *Localization of the Glial Fibrillary Acidic Protein in Astrocytes by Immunofluorescence*, 43 Brain Res. 429-35 (1972)
- \_\_\_\_\_ A17 Geisert, E. et al., *The Neuronal Response to Injury as Visualized by Immunostaining of Class  $\beta$ -tubulin in the Rat*, 102 Neurosci. Lett. 137-41 (1989)
- \_\_\_\_\_ A18 Lendahl, U. et al., *CNS Stem Cells Express a New Class of Intermediate Filament Protein*, 60 Cell 585-95 (1990)
- \_\_\_\_\_ A19 Mayer, M. et al., *Ciliary Neurotrophic Factor and Leukemia Inhibitory Factor Promote the Generation, Maturation, and Survival of Oligodendrocytes*, 120 Development 142-53 (1994)
- \_\_\_\_\_ A20 Wysocki, L. et al., *"Panning" for Lymphocytes: A Method for Cell Selection*, 75 Proc. Nat'l Acad. Sci. USA 2844-48 (1978)
- \_\_\_\_\_ A21 Bottenstein, J. et al., *Growth of a Rat Neuroblastoma Cell Line in serum-free Supplemented Medium*, 76 Proc. Nat'l Acad. Sci. USA 514-17 (1979)

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### References Cited by Applicants

While the filing of Information Disclosure Statements is voluntary, the procedure is governed by the guidelines of Section 609 of the Manual of Patent Examining Procedure and 37 C.F.R. §§ 1.97 and 1.98. To be considered a proper Information Disclosure Statement, Form PTO-1449 shall be accompanied by a copy of each listed patent or publication or other item of information and a translation of the pertinent portions of foreign documents (if an existing translation is readily available to the applicant), an explanation of relevance of each reference not in the English language, and should be submitted in a timely manner as set out in MPEP Sec. 609.

Examiners will consider all citations submitted in conformance with 37 C.F.R. § 1.98 and MPEP Sec. 609 and place their initials adjacent the citations in the spaces provided on this form. Examiners will also initial citations not in conformance with the guidelines which may have been considered. A reference may be considered by the Examiner for any reason whether or not the citation is in full conformance with the guidelines. A line will be drawn through a citation if it is not in conformance with the guidelines AND has not been considered. A copy of the submitted form, as reviewed by the Examiner, will be returned to the applicant with the next communication. The original of the form will be entered into the application file.

Each citation initialed by the Examiner will be printed on the issued patent in the same manner as references cited by the Examiner on Form PTO-892.

The reference designations "A1," "A2," etc. (referring to Applicant's reference 1, Applicant's reference 2, etc.) will be used by the Examiner in the same manner as Examiner's reference designations "A," "B," "C," etc. on Office Action Form PTO-1142.

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